



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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August 27, 1993

TO: Minerals File

FROM: Holland Shepherd, Senior Reclamation Specialist *HW*

RE: Site Inspection, Energy Fuels, MiVida Mine, M/037/028, San Juan County, Utah

Date of Inspection: August 26, 1993
Time of Inspection: 9:00 a.m. - 12:00 a.m.
Conditions: Sunny, cool, cloudy
Participants: Chris Rohrer, Tony Gallegos, Holland Shepherd, DOGM;

Purpose of Inspection: Follow-up on recent reclamation activity at the MiVida site that was being conducted by Energy Fuels. Also, to evaluate the site for upcoming DOGM State reclamation efforts.

Three members of DOGM staff visited the MiVida site during this inspection date to evaluate the site for outstanding reclamation that still needed to be performed. We borrowed Chris Rohrer of the AML staff to help determine what portions of the site needed to be reclaimed, what the reclamation specifications would be, and how we would write that information into contracts that would be up for bid to reclamation contractors.

It was important to have Chris along during this inspection. Chris has been involved in the design and implementation of reclamation plans on a large number of abandoned mine sites, in Utah. The MiVida is one of the first sites in which the minerals program will be involved in bidding out reclamation contracts.

We visited the upper MiVida (the old portion of the site) first. This area has been reclaimed by Energy Fuels. The new plant community found on this portion of the site is doing well. The waste dump has been reclaimed, regraded and is revegetating. The drainage on this portion of the site is doing OK in areas that the operator has reclaimed.

The operator recently went back onto the site to stabilize the old Atlas escape shaft that had been reclaimed last year, but had sunk during the spring rains. The mine shaft has been refilled by the operator and appears stable.

The most acute area of concern, on the Upper MiVida, is associated with pre-law portals and sink holes that had been left behind by old mining activity. This portion of the site was not part of the original permit, approved between DOGM and Minerals West. However, there are several large sink holes and a couple of large portals in the area that are a danger to the public, and should be sealed up and stabilized. The areas which could be dangerous to the public are located around what was the old (and still standing) powder magazine. There are three large sink holes, two large portals and the area is also riddled with old drill holes that were never plugged; some are starting to enlarge. Energy Fuels



reclaimed several of the old pre-law portals and holes that were associated with MiVida during their reclamation efforts. There is one portal they backfilled that was behind the old bunkhouse that is starting to re-open and can be seen in the area they have reclaimed. This old portal or hole should also be backfilled.

The plants growing on the upper MiVida site are predominately sweetclover and halogeton. There is some indian ricegrass growing in places, but very sparsely. Most of the plants growing on the site at this time are weedy invaders. Some of the species planted by the operator will probably not start to show up until next year.

The entire mine site has received a considerable amount of rainfall this spring and summer. In fact, it had been raining heavily the day before we reached the site. An erosion gully about 1 foot in depth has started on the southeast face of the old waste dump, associated with the access road to the site. Chris Rohrer suggested that we place sediment traps, straw bales or small check dams in the thalweg behind the old office buildings and bunkhouses. This is the low flat area where the water pools and comes down the canyon before it flows over the waste dump.

The drainage associated with the county road that goes through the old portion of the MiVida needs to be addressed too, as part of our reclamation. The drainage ditch on the east side of the road needs to be re-established. We decided that we should install a drainage ditch that's about 150 feet long and about 1 1/2 feet deep and about 3 feet wide. This would keep the water from sheeting across the road and draining down the south face of the reclaimed waste dump area.

A portion of the drainage ditch associated with the road on the south side of the county and access road, as you move down towards the McCormick Tunnel and the old Charlie Steen MiVida portal, needs to be re-established and dug out. Also, a water bar needs to be placed across the county road, to direct the drainage into the main channel so it will stop eating up the road. This water bar needs to be placed on the county road just west of the old Charlie Steen portal.

Moving down the canyon to the McCormick area, Energy Fuels has reclaimed the access road to the McCormick tunnel by recontouring the road and leaving it very rough and inaccessible to traffic. Energy Fuels, also reripped the McCormick pad, reestablished the berm on the west side of the pad and established a large partially riprapped drainage ditch which channels drainage off of the pad down a side face of the waste dump and then into the main drainage. Efforts done by Jim Butt, Energy Fuel's contractor, seem to be working well, because there was no sign of erosion on the face of the waste dump, after the heavy rains that occurred during the week.

We looked at the McCormick tunnel to determine how to best prevent public access into the tunnel. Apparently, the rail cars extend about 50 feet into the tunnel and stop just in front of the backfilled area. The public can access the McCormick tunnel back in about as far as the back extent of the ore cars, but can't go any further because they're prevented by a large backfill plug, about 50 feet in length. We discussed several different options to prevent the public from getting back into the dangerous area of the portal entry way. Those options included using a cable net, a chainlink fence, and putting up concrete and mortar wall. We discussed using different combinations of these methods in different areas of the portal. We felt that it might be necessary to put up a chainlink fence in front of the portal with signs to warn people about the hazards of entering the portal area.

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The McCormick portal is composed of a wooden entry way that extends out from the rock about 20 feet and extends back into the rock portal passageway another 20 to 30 feet. We felt that eventually, that even though the wood is heavy duty cedar timbers, this wooden entry way will eventually rot and create a hazard to the public. After you pass through the wooden entry way, you are under a rock ceiling supported by roof bolts and metal mats. The rock ceiling beyond the wooden entry way may not be entirely secure and will eventually become unstable over time. We are particularly interested in keeping people out of this area. We felt it would be possible to establish the cable net somewhere in the interior of the wooden entry way and put a chainlink fence on the outside with signs warning people to stay out of the portal. The Division will need to decide how much portal access to give the public and which methods or combination of methods will preserve the historic flavor of the site and protect the public.

Moving down the canyon further, looking at the west or bottom portion of the McCormick area, below the McCormick bin, the road, for the most part, has been recently reclaimed by Energy Fuels. All the erosion, scaring, and sluffing has been taken care of, that was taking place during our inspection last spring. The McCormick pad, or truck turnaround pad, still needs to be ripped and seeded.

Another item, that the Division will need to address, includes the design and posting of historic signs at different locations on the site. The number of signs, their locations, and the content of the signs will need to be decided.

Probably the most difficult part of the reclamation that the Division needs to do will involve making the McCormick portal safe for the public. Some areas of the site will need to be reseeded as part of our work as well.

To summarize what still remains to be done at the MiVida involves:

- stabilizing the county road;
- improving the hydrology associated with the road;
- keeping water off of the waste dumps;
- backfilling and stabilizing the sink holes/portals on the eastern edge of the old MiVida (if allowable);
- controlling public access into the McCormick tunnel;
- deciding on the location, number, and content of the historic signs and posting them;
- ripping and seeding the McCormick ore pad;
- reseeding portions of the site that look like they need to be reseeded.

jb
cc: Wayne Hedberg, DOGM